

WHAT IS CLAIMED IS:

1. A terminal for an organic material, which comprises a carbon nanotube to be in contact with an organic material having a 6-membered carbon ring, and a metal that is in contact with  
5 a part of the carbon nanotube.

2. A thin-film transistor comprising, as an electrode thereof, a terminal that comprises a carbon nanotube to be in contact with an organic material having a 6-membered carbon ring, and a metal that is in contact with a part of the carbon nanotube.

10 3. A thin-film transistor comprising at least a first electrode region, a second electrode region, and a channel formed of an organic material having a 6-membered carbon ring for electrically connecting the first electrode region and the second electrode region, wherein the first electrode region and the  
15 second electrode region each comprise a carbon nanotube that is in contact with the 6-membered carbon ring of the channel at its interface, and a metal that is in contact with a part of the carbon nanotube.

20 4. A thin-film transistor comprising a substrate, an insulation layer formed on the substrate, a first electrode region, a second electrode region and a channel formed of an organic material having a 6-membered carbon ring for electrically connecting the first electrode region and the second electrode region, wherein the first electrode region, the second electrode  
25 region and the channel are formed on the insulation layer, and the first electrode region and the second electrode region each comprise a carbon nanotube that is in contact with the 6-membered

carbon ring of the channel at its interface, and a metal that is in contact with a part of the carbon nanotube.

5. The thin-film transistor as claimed in claim 3, wherein the carbon nanotube contains a fullerene.

5        6. The thin-film transistor as claimed in claim 3, wherein the carbon nanotube contains a C<sub>60</sub>, C<sub>70</sub>, C<sub>76</sub>, C<sub>78</sub>, C<sub>82</sub>, C<sub>84</sub> or C<sub>92</sub> fullerene.

7. The thin-film transistor as claimed in claim 3, wherein the carbon nanotube has a resistance of from 10<sup>-5</sup> to 10<sup>-4</sup> Ωcm.

10       8. The thin-film transistor as claimed in claim 3, wherein the channel is formed of an acene.

9. The thin-film transistor as claimed in claim 3, wherein the channel is formed of a thiophene or a fullerene.

15       10. The thin-film transistor as claimed in claim 3, wherein the channel is formed of pentacene.

11. The thin-film transistor as claimed in claim 3, wherein the carbon nanotube is a multi-layered one.

12. The thin-film transistor as claimed in claim 3, wherein the metal that is in contact with a part of the carbon  
20 nanotube is gold, titanium, chromium, thallium, copper, titanium, molybdenum, tungsten, nickel, palladium, platinum, silver or tin, or a combination thereof.

13. The thin-film transistor as claimed in claim 3, wherein the metal that is in contact with a part of the carbon  
25 nanotube is a combination of gold and platinum.

14. The thin-film transistor as claimed in claim 3, wherein the contact length between the channel and the carbon

nanotube is from 1 to 10  $\mu\text{m}$ .

15. The thin-film transistor as claimed in claim 3, wherein the length of the carbon nanotube is from 5 to 20  $\mu\text{m}$ .

16. The thin-film transistor as claimed in claim 4,  
5 wherein the insulation layer is formed of an inorganic material, a polymer material or a self-organizing molecular membrane.

17. The thin-film transistor as claimed in claim 4, wherein the substrate is an insulating substrate or a semiconductive substrate.

10 18. The thin-film transistor as claimed in claim 4, wherein the first electrode region and the second electrode region have two or more carbon nanotubes each.

19. The thin-film transistor as claimed in claim 4, wherein the carbon nanotube contained in the first electrode  
15 region and the carbon nanotube contained in the second electrode region are parallel to each other in the area in which they are in contact with the channel.

20. A method for producing a thin-film transistor, which comprises a step of forming a first metal electrode and a second  
20 metal electrode on a substrate, a step of dispersing carbon nanotubes so as to form an electroconductive structure between the first metal electrode and the second metal electrode, a step of cutting a part of the carbon nanotubes through electric breakaway, and a step of forming a channel of an organic material  
25 on the carbon nanotubes that include the cut part thereof.